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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,174	10/23/2003	Benjamin N. Eldridge	P47C2-US	8347
27521	7590	12/07/2004	EXAMINER	
KEN BURRASTON KIRTON & MCCONKIE PO BOX 45120 SALT LAKE CITY, UT 84145-0120			ABRAMS, NEIL	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,174	<b>Applicant(s)</b> ELDRIDGE ET AL.	
	<b>Examiner</b> Neil Abrams	<b>Art Unit</b> 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-65 is/are pending in the application.
- 4a) Of the above claim(s) 21-25 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-34 and 36-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Abstract reference to palladium alloys should be added.

The election of group II, species 3, figs. 9A –13B is noted. Claims 26-34 and 36-65 are ~~found~~<sup>to</sup> readable on elected species. Claims 21<sup>to</sup>25 and 35 stand withdrawn, election being without traverse.

Parent case paragraph object to for second listed patent, filing date must be added.

Priority based on listed cases is noted to be date of February 13, 1998.

Claims 28, 29, 31, 32, 34 51-55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

These claims are directed to new matter not disclosed in the application as filed.

In the spec as it relates to the claims at issue, only fig. 9A spring layer 912 is disclosed to be formed of palladium or palladium-cobalt~~6~~. No other disclosure of palladium use is seen.

No disclosure is seen for the claims 28, 29 alloys or for the claim 31 "tip comprising palladium". The layer 912 is not shown to extend into the contact tip 940. Claim 32 similarly lacks basis in disclosure as filed. For claim 34, layer 912 does not form a majority of the body 920. Claims 51, 52, 53, 54, 55 similarly are directed to new matter without basis in disclosure as filed. If such basis are present for any item noted

above, it should be pointed out by page and line. Note preliminary amendments are not considered original disclosure.

Assuming basis is shown the following applies.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claims 28, 29, 31, 32, 34, 51-55 features not above must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 49 and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Grabbe 598 or Desai.

Grabbe fig. 7 discloses an interconnect structure 10 that may be formed of palladium, col. 4, lines 8-15. For claim 59, the contact is resilient. Desai, see resilient interconnect 10, figs. 1, 4 that may include palladium, col. 4 lines 5-10.

Claims 50-54, 55, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabbe 598 alone or taken in view of Desi, Abys and Shida.

Grabbe does not discuss use of specific alloys such as palladium Cobault, etc. Use of palladium-Cobault alloy disclosed by Shida col. 1, lines 60-65 and Abys, as plating, col. 2, lines 10-20.

It would have been obvious to use such materials in Grabbe for the contact or as plating on copper. These form reliable contact surfaces. Even without secondary references, it would have been obvious to use such materials for the Grabbe contact since their use provides no stated advantage over the Grabbe palladium alloy. For claim 60 also obvious to use plating of palladium over copper as in Desai, col 4, Abys, col. 2 or to form the contact body of plural layers as in Shida at 1, 2, 3. Any of these changes would result in a contact comprising plural layers, one being of palladium.

Claims 26-34, 37-48, 56 and 61-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babuka in view of Abys, Grabbe (598), Shida, Desai and Scheingold.

Babuka includes a contact with a base 27 attached to a card 10, a body 26 and a tip 25, but does not disclose use of palladium. Grabbe, Shida, Abys and Desai all disclosure use of palladium alloys for base contact material or for platings. Obvious to

use these materials for the Babuka contact body or for plating on such body. Either change would result in the claims 26, etc structure. These changes would result in use of reliable contact engagement with lessened corrosion due to plating. For claims 27, 28, etc, obvious to use alloys of palladium-cobalt, or other types in view of Abys, Shida, this being known materials for reliable contact manufacture.

As examples obvious to form the Babuka contact of the three layers Shida material or of copper plated with a layer of palladium alloy in view of Abys. The exact type alloys used would be matter of design producing no stated advantage over prior art examples.

For claims 33, obvious to form Babuka tip 25 to be integral with the contact in view of Scheingold at 36, fig. 2. This would enable a less costly contact. For claim 31, 32 obvious to use plating (layer) or Shida type contact 10 including tip for reasons discussed above.

For claims 39, 40, 61, 62, 63-65, obvious to attach Babuka type contacts to a die or semiconductor wafer. This would be obvious variation producing no new result. For claims 41, etc Babuka card 10 is readable as a probe card.

Claims 26-34, 36-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faraci in view of Desai, Abys, Grabbe (598), Shida and Fjelstad.

Faraci figs. 5B, 3A, 3C discloses a contact with base or post 180 body 200 and the base secured to substrate 110. It would have been obvious to form body 200 of palladium or coated with palladium alloys in view of Abys, Desai, Grabbe, and Shida or

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to use palladium-cobalt or other alloys in view of Shida and Abys. This would only be choice of known materials for contact manufacture.

For claims 30-33, etc, note tips 320; also obvious to form these tips of palladium alloy or to plate them with such material in view of Desai, Abys, as discussed above and Fjelstad, metal 34, col. 8, lines 25-30.

For claim 38, obvious to form beam 200 of layers in view of Shida or of copper with palladium layer in view of Abys. These changes are applied to figs. 3A, 3C, 5B contacts and would be use of standard materials. For claims 39, 40, 48, Faraci part 110 is readable as a probe card and obvious to form it <sup>as</sup> a die or wafer such change producing no new result.

Claims 39, 40, 46, 47, 60, 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myer in view of Desai and Shida.

Meyer discloses wafers (dies) with contact structures having round bases and bodies 50, figs. 3, 4, 5 but lacks use of palladium. It would have been obvious to form the contacts of palladium in view of Shida or to use palladium plating in view of Desai. This would result in reliable contacts with less corrosion.

Any inquiry concerning this communication should be directed to ~~Gene M.~~ <sup>Neil Abrams</sup>

~~Manson~~ at telephone number (571)272-1059. <sup>2089</sup>

Abrams/ds

11/30/04

  
NEIL ABRAMS  
EXAMINER  
ART UNIT 322